EeMAP
Energy efficient
Mortgages
Action Plan

Energy Efficient Mortgages Initiative

How can banks play a game changing role in improving Energy Efficiency?

In the EU 28 there are…

510 million people

7498 MFIs and 188,109 branches

247 million dwellings

…of which

More than 350 million live under their own roof

Private financing →

On average each branch serves around 2,700 people

more than 220 million dwellings were built before 2001

This initiative has huge potential!

List of Banks Involved in EeMAP Initiative

- ABN Amro
- BNP Paribas Fortis
- ING
- Münchener Hypothekenbank
- UniCredit
- Crédit Foncier de France
- Barclays
- Berlin Hyp
- Crédit Agricole CIB
- Volksbank Bozen
- Caja Rural de Navarra
- Cooperative Central Bank Cyprus
- NIBC Bank N.V.
- Obvion Hypotheken
- Crelan
- BBVA
- JP Morgan
- Banca Monte dei Paschi di Siena
- Fannie Mae
- DBS Bank Singapore
- Japan Housing Finance Agency
- HSBC
- KBC

Energy Efficient Mortgage Pilot Phase: Existing Data Analysis & Operational Test Phase

Phase 1: Analysis of Existing Data:

- Substantiation of business case
- Focus on correlation between EE and LGD & PD

Phase 2: Operational Test Phase:

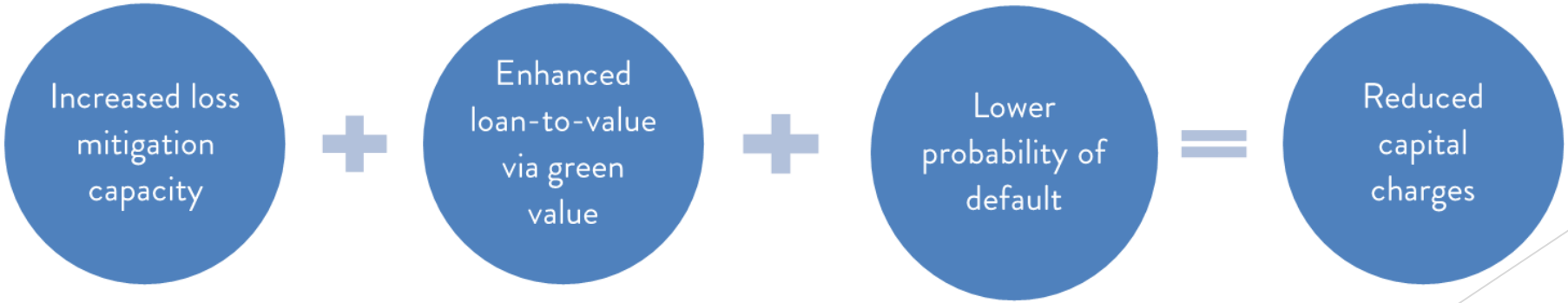
- Deployment of valuation instructions & EE indicators
- Origination of EE mortgage product
- Potential involvement of EIB/EIF
- Data collection

Objective & Underlying Business Case

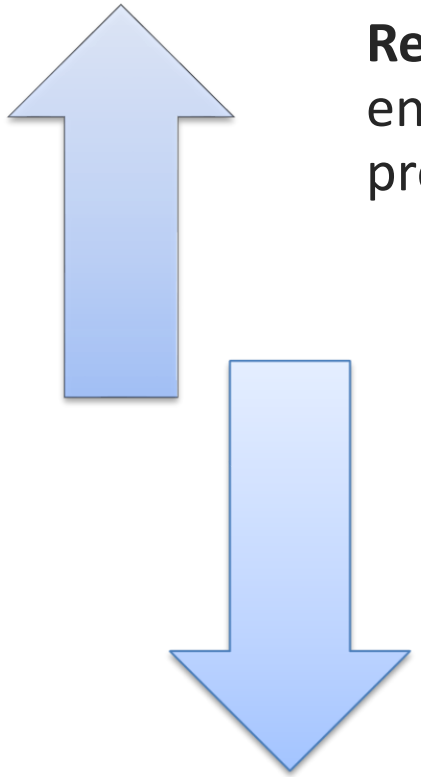
The **ultimate objective** is a pan-European private bank financing mechanism, based on a standardised approach, to encourage energy efficient improvement by households of the EU's housing stock by way of financial incentives linked to the mortgage, and in this way support the EU in meeting its energy savings targets.

Independent from, but complementary to, public funds or tax incentives

Underlying business case:



Underlying Risk Parameters Impacted by Energy Efficiency



Retrofitting impacts positively on property value ensuring **wealth conservation** & **loss mitigation** by preventing "brown discount"

EE leads to a reduction in the impact of energy costs to income, reducing borrowers' **probability of default**

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Energy Efficiency: Impact on Properties?

Every time a house moves up a notch in energy performance, its price gets around the same boost that it would from an extra 10-15 m² in size

EE jump = Gain of €24,000 over 30 years:

- A renovated house that moves from an 'E' to a 'B' notch in its energy performance certificate (EPC) will save an estimated €24,000 over 30 years according to an analysis of 365,000 house sales in Denmark last year

EE notch= €5,400/€7,400 for an average 100 m² property:

- Each one-notch energy improvement from G-A is worth between €5,400-7,400 to an average 100 m² property according to a Copenhagen Economics Study for the Danish Energy Agency

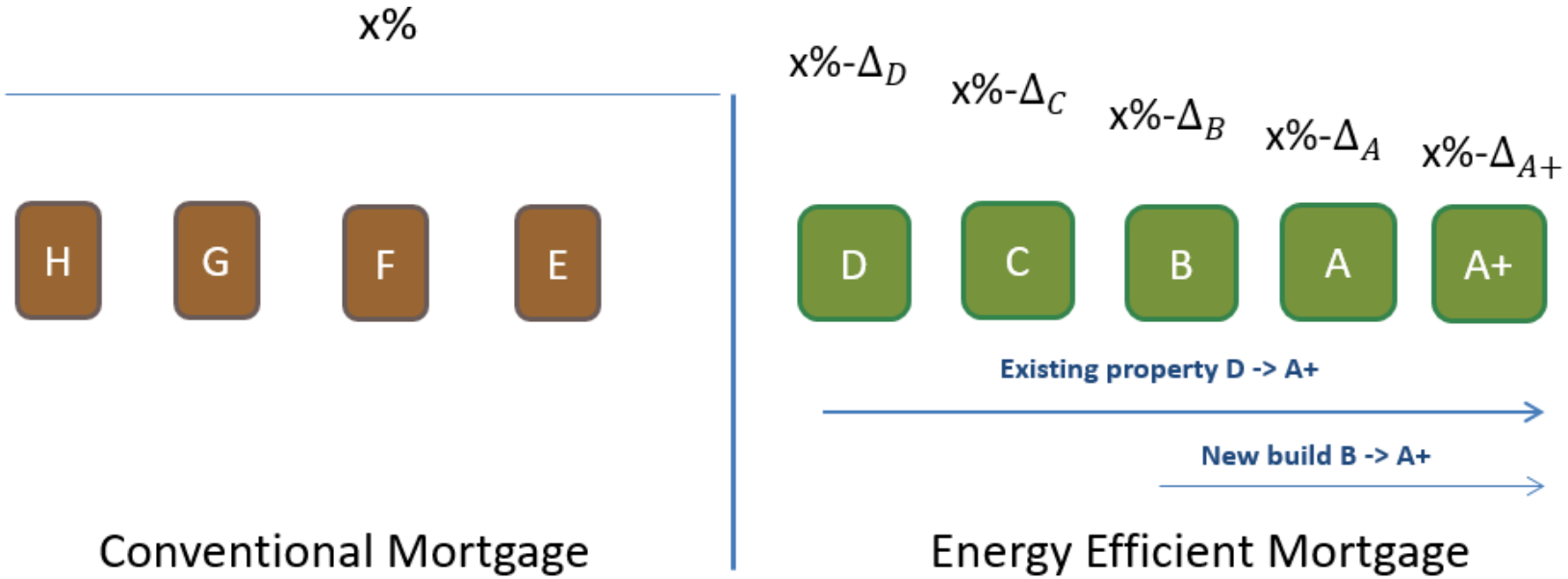
Correlation between EE and sale price?

- A European Commission assessment in 2013 found that in Vienna, a one-notch EPC improvement corresponded with an 8% rise in the sale price. In Flanders (BE), the equivalent of a one-notch upgrade was found to trigger a 4.4% rise in property value, while for Marseille and Lille (FR), the figure was 4.3%.

Methodology - Financing Mechanism

- Key challenge: **<u>to incentivise energy efficient investment in existing dwellings</u>**, which constitute bulk of EU housing stock

- Based on a **set of EE indicators**, lenders could offer:
  - *New Builds:* Discount in interest rate for new builds with energy rating A+/A or B;
  - *Existing property:* Discount in interest rate according to improvement in energy rating of property between D and A/A+



x%: mortgage interest rate

EE delta: $\Delta_{A+} > \Delta_A > \Delta_B > \Delta_C$

Bridging Renovation Gap - In Practice

EE Renovation

Before EE Renovation

Mortgage application

Energy efficiency advisor (EEA) to advise on:
1. Necessary EE renovation
2. Complementary funding sources (subsidies)

Mortgage granted & EE top-up provided directly to SME

T_0

Ex ante Valuation of property

Qualified SME selected by bank to carry out EE renovation

After EE Renovation

SME carries out EE renovation, guaranteeing performance

Bank grants preferential interest rate on mortgage based on EE/smart meter

T_1

EEA certifies EE renovations in line with EE requirements

Ex post valuation of property

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The EeMAP project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 746205.

The EeDaPP project will receive funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 784979.